INPUT
SEND
FX RETURN
REC OUT /
6Ω SPEAKER 16Ω
MIDI
FOOTSW.
AMP 1
BluGuitar
TONE INNOVATION
MODERN
CLASSIC
VINTAGE
CLEAN
OVERDRIVE
NANOTUBE 100
MASTER
VOLUME
GAIN
MASTER
BASS
MIDDLE
TREBLE
REVERB
BOOST

MANUAL

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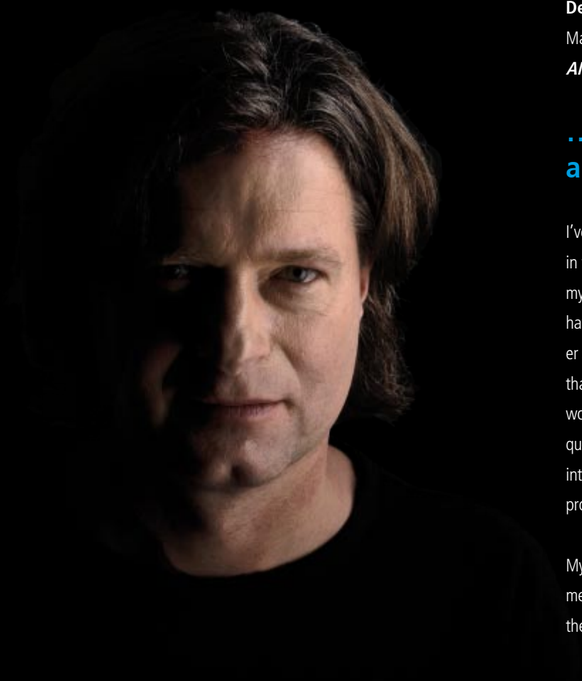
I HAVE A DREAM



Dear Guitar buddy,

Many congratulations on your ***AMP1***™ purchase!

AMP1™ is an extraordinary amplifier, and its back story is just as unusual…

… I had a dream. This dream has come true, and you're holding it in your hand right now.

I've always dreamed of an amp that can fulfil all my professional requirements onstage and in the studio, and that at the same time is so small and light I can always have it with me in my gigbag. The powerful tones of guitarists like Jimi Hendrix, Jeff Beck and Ritchie Blackmore have inspired and influenced me. As a professional guitarist, sound designer and co-developer of numerous guitar amps, I feel committed to continuing these powerful tonal traditions that are naturally assertive and full of character. As well as my own trademark sounds, my work requires me to have a wide tonal palette – from jazz to metal – and all in professional quality. My dream was to put the immense power and character of vintage tube amplifiers into one small package that would fit in your glove compartment or gigbag – without compromising on the tones. Sounds like Mission Impossible!

My dream amp should suit any guitarist, whether he or she plays country, blues or heavy metal. It should also suit everyone from purists to full-on sound geeks, without weighing them down with unnecessary features, but also leaving all the vital functions intact!

TUBEAMP EVOLUTION

1950s and 60s

The main function of the first tube amps in the 50s was to get guitars heard over bands and orchestras. When distorted guitar tones were at last discovered in the 60s, this radical stylistic device paved the way for new genres like rock. In those days, before the birth of the PA system, the only source of sound for concert audiences came from the onstage amps themselves. Because of this, volume was the key feature of the 60s tube amp.

1970s and 80s

In the 70s and 80s, guitarists demanded more and more features from their amps. Multiple channels and an effects loop became the new amp standard. The newly emerging digital technology brought programmable amps into the marketplace for the first time. However, a massive flood of additional features meant that before long, hardly anyone was able to make good use of them.

1990s

Seeing as the first digital modelling amps offered a bunch of presets, but couldn't convince tonally, the 90s saw a return back to the true virtues of the tube amp. Traditional build types – like Plexi or Tweed – experienced a renaissance as players once again expressed the desire for more individual tones. Some classic amp models were upgraded with MIDI interfaces to be more flexible.

Since 2000

Since the turn of the century, a clear trend towards smaller, more portable amps has appeared – seeing as not every guitarist wants to have to take a van to the gig. However, these so-called "Lunchbox Amps" are often limited to just one sound. Should a genuinely clean or heavy sound be desired, these small specialist amps are often lacking in headroom, dynamics, tone and assertiveness. While 30 watts may be enough for a living room, they quickly reach their limits when playing on big stages, at open air gigs, or even in the practice room. The sound becomes "muddy" and can't fill the space. Sometimes you just need the power reserves of a 100-watt amp; it's just that no one wants to lug these heavy boxes around nowadays.

Powerful All-Tube Amps

Big amps want to be played loud, though, but in many situations, they're just too loud, and clog up the stage sound. Everyone – the crowd, the soundman, and the band – ends up being unhappy with the results. Despite this, many guitarists don't want to go without the fat, warm sound of a driven tube amp. They buy into the purist solution of a full-tube amp with PowerSoak. A PowerSoak enables the player to push the amp into saturation while limiting the volume to more tolerable levels. Unfortunately, due to flaws in the system, the PowerSoak also leads to a loss in sound quality. The power reduction doesn't just reduce the volume, but also the power amp's "Current Feedback", which leads to a flatter, less lively tone. To combat this problem, it was necessary to develop a new power reduction system that doesn't compromise on sound quality.

Most of today's amps are still based on the philosophies of yesterday. In order to fully meet musicians' current needs, I have had to go down completely new technological and conceptual paths.

I wanted to create an amp that would deliver the perfect sound in ANY SITUATION: from 0.15 Watts at home to 100 Watts on big stages.

Time For A New Standard 100 Watt Compact Tube Amp

Pros
- good, individual tone
- few control buttons/features
- easy operation

Cons
- not flexible
- normally only works in one situation

Pros
- flexibe
- versatile

Cons
- compromises on sound
- complicated operation
- too many features

The New Standard:
AMP1 ™ - 100W TUBE TONE POWER

In 2014, ***AMP1™*** becomes the first ever guitar amp to bridge the previously insurmountable gap between the loud, characterful tube sound, and easy transportation, stress-free operation and professional features. ***AMP1™*** is the first of a new generation of amps: without compromise on sound quality and performance, suitable for any application, and always with you wherever you need it. As a guitarist, with ***AMP1™***, you're ready for anything, anywhere.
AMP1™ heralds the start of a new tube amp era.

AMP1™ is an amp with genuine character. You can play any style with it. ***AMP1™***'s uniquely customisable sounds and features give you the freedom to realise, save and recall all your favourite tones at any time. Despite its versatility and its remarkable options for expansion, AMP1TM does not burden you with any unnecessary features, so you can concentrate on the most important thing: making music.

INDIVIDUAL

During my career as a pro guitarist, I have had the chance to test nearly all the legendary guitar amps of the past five decades, and have tried countless FX units. Thanks to my experience, today I know what good tone depends on, and how to recognise what is unnecessary or even disruptive. To find your own tone, you need room to manoeuvre. But too many features are not the answer! ***AMP1*** ™ will make you stand out from the crowd. It offers you every possibility to find your own personal tone without having to get lost in a jungle of countless functions.

If you're a player who needs just a few basic sounds, then ***AMP1*** ™ is your perfect match. Should you want more sounds to play with, though, ***REMOTE1*** ™ offers a bunch of extra possibilities. Plus, if you want to integrate your favourite pedals into your ***AMP1*** ™ setup, use the ***REMOTE1*** ™ with the ***LOOPERKIT*** ™ to create a fully programmable switching system featuring four true bypass relay loops. You decide what you need.
My tip: less is often more! ;-)

UNIQUE

Only with 'your tone' will you become one with your guitar. Find it, and you'll be truly happy. You'll hear and feel that it's not just ***AMP1*** ™'s tones that inspire you, but that its playing feel will also draw you in – until you're hooked! ***AMP1*** ™'s direct response, booming bass that never muddies, trebles that never get tinny and annoying, and almost unfathomable depth of tone allow you to become one with your guitar. With ***AMP1*** ™ you'll find your own tone!

EVERYTHING YOU NEED – ALWAYS ON HAND

VERSATILE AND LOUD

AMP1 ™ is designed for professional use onstage and in the studio. The Nanotube 100-watt power amp delivers your own tonal palette with the best tube quality and enormous sound pressure levels.

AMP1 ™ is incredibly LOUD! Four amazing, modifiable channels will take you on a stunning journey through the history of the guitar amp (from Clean to Vintage to Classic and Modern tones). ***AMP1*** ™ also features switchable and adjustable Boost and Reverb controls, three integrated footswitches, a truly outstanding Speaker Simulation mode for recording, and a headphone output, giving you all the options you would expect from a modern, boutique tube amp.

On the other hand, thanks to its lively overtones, ***AMP1*** ™ also sounds balanced and fat at living room volume. And with the **PowerSoak**, you can even do an authentic "Jimi" in your bedroom using just 0.15 watts of power.

FLEXIBLE

You can take your ***AMP1*** ™ with you wherever you are – it fits right in your gigbag. It's incredibly compact and very light. Just to make everything that little bit quicker before and after the gig, ***AMP1*** ™ can be securely attached to (and then removed from) your pedalboard or amp cab in seconds thanks to ***EASYLOCK*** ™ – the magnetic attachment system from **BluGuitar®**. With the ***REMOTE1*** ™ floor control you can build ***AMP1*** ™ into a fully programmable amp system – including adjustable **PowerSoak**. ***AMP1*** ™ offers you the ultimate in practicality and tonal flexibility.

MY DREAM CAME TRUE

For a very long time, it seemed to be impossible from a technical viewpoint – but I finally managed to achieve the unachievable by collaborating with a brilliant Russian engineer. By employing an unusual technical mix, we were able to keep a 100% analogue signal from the guitar to the loudspeaker, just like with a classic tube amp: ***AMP1™*** was born! All of ***AMP1™***'s features draw on my 30-odd years of experience as a pro musician and developer.

To make my dream come true, I founded ***BluGuitar®***. This brand stands for the complete and uncompromising implementation of my visions and product ideas. As a guitarist, I only want to develop products that are also fun for me to use and play with. For this reason, I hope I can offer really interesting products to every guitarist out there.

As well as my personal signature tones, ***AMP1™*** naturally offers the tones of numerous classic amps – from American clean to metal – all at professional quality. I have made this dream come true for every guitarist out there – and for me. The dream of a huge sound in your gig bag. From now on, ***AMP1™*** will be your companion wherever you are.

Have fun, and I wish you every success with it!

Thomas

AmpHead

AMP1™ is a fully analogue guitar amp with four separate channels, amplified by a 100-watt Class D tube power amp. ***AMP1™*** features **ONE** Clean Channel and **THREE** Overdrive channels. Each of the four channels can be supplemented with an extra portion of gain via the built-in Boost control. ***AMP1™*** is perfect for use without a loudspeaker, just with headphones or for "**Silent Recording**" (see pages ***27***). You can use ***AMP1™*** like an amp head on top of your cab, connect it up to your effects board and stompboxes, or simply have it on the floor in front of you.
The underside of ***AMP1™*** also features a handy recess that allows the system to sit safely on cabs that have carry handles on top.

Put your ***AMP1™*** on a guitar cab, and you can use a standard double footswitch to select between **CLEAN/OVERDRIVE** and **BOOST** On/Off settings. Your ***AMP1™*** is now a fully-fledged **100-watt amp head!**

AMP1™ is equipped with numerous ports and features. With these, you can operate ***AMP1™*** as a single or multi-channel amp, or even as a completely programmable MIDI system.

StompAmp

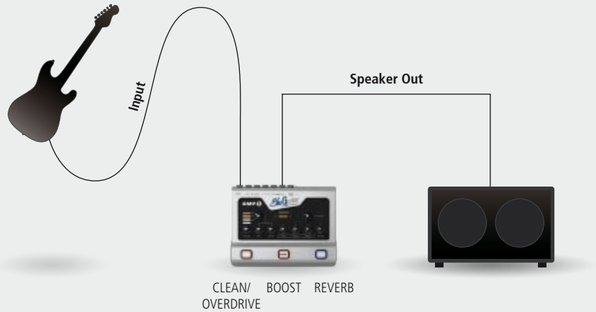
AMP1™ is designed so that you can have it as a fully-fledged, standalone amp right on the floor in front of you. The illuminated footswitch **11** allows you to select between Clean and the desired **Overdrive Channel**. With **12**, you activate the **Boost**, and with **13** you can choose **Reverb**.

For this use, you will need a longer speaker cable to plug your amp cab in with, as you should always put the cab behind or next to you.

REMOTE1™ has been developed for those of you who want direct access by footswitch to all **four channels**, the **FX loop**, **Reverb**, **Boost**, a **second Master Volume**, **PowerSoak** and programmable **Gain**. ***REMOTE1™*** connects to ***AMP1™*** simply via a normal guitar cable. The cable powers the unit, and at the same time transfers all the switching functions to ***REMOTE1™***. For controlling ***AMP1™*** via other MIDI foot controllers, the ***MIDI1™*** Adapter is available (see page ***37***).

For the optimal use of ***AMP1™*** as a StompAmp, you can program the three footswitches with individual sound settings (see page ***39***).

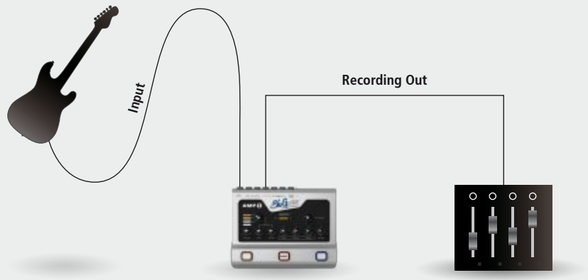
It's your choice whether you want to use ***AMP1™*** as a single, double or multi-channel system together with ***REMOTE1™***.



Recording

You can also use ***AMP1***™ without loud speakers: just with headphones, or by connecting it to a mixing desk or a home stereo system. Even without load, the amp won't get damaged, whatever setting you select. The **Recording Out** delivers the very authentic signal of a miked-up guitar cab.
That means you can make recordings at any time, or practice through headphones.
In this context, the **Master Volume** **3** then controls the volume of the Recording Out or headphones (see pages ***26*** and ***27***).

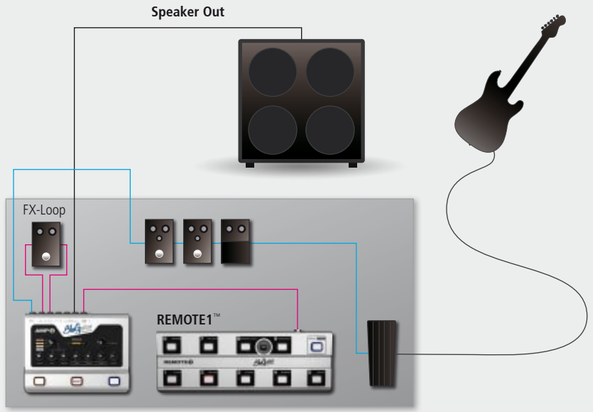
Attention!
If you connect the Recording Out to your home stereo, make sure not to overload your hi-fi speakers. This kind of speaker does not provide the volume levels needed to play in a band. However, it should provide sufficient power to practice at moderate volumes in most cases. Compared with guitar amps, home stereo speakers are designed to produce a deep bass response, which makes them a lot more sensitive.



Programmable Guitar System

With ***AMP1***™ it's possible to build a complete 100-watt guitar amp and effects setup on a single pedalboard for the first time ever. This will really help reduce the amount of cabling guitarists will need to use compared to a normal amp/FX/pedalboard setup. ***AMP1***™ is so light and compact that you can easily mount it to a pedalboard. With ***EASYLOCK***™ (see page ***40***) – the magnetic attachment system for ***AMP1***™ – you can securely attach and then remove ***AMP1***™ to and from your pedalboard in one quick movement (no fiddly Velcro required!) to use it as a "standalone". With ***REMOTE1***™, you can use all of ***AMP1***™'s functions and create Presets too. With each Preset, ***REMOTE1***™ simultaneously sends a MIDI program change command that can be used to switch external MIDI-enabled effects equipment.

For those who wish to use their own MIDI board, there is an adapter available that transforms ***AMP1***™'s Remote port into MIDI: ***MIDI1***™. When plugged in, you can use your own MIDI board to operate all of ***AMP1***™'s switching and control functions – just like you could with ***REMOTE1***™ (see page ***38***).



AMP1™ + REMOTE1™ + LOOPERKIT™=

A fully programmable professional guitar system

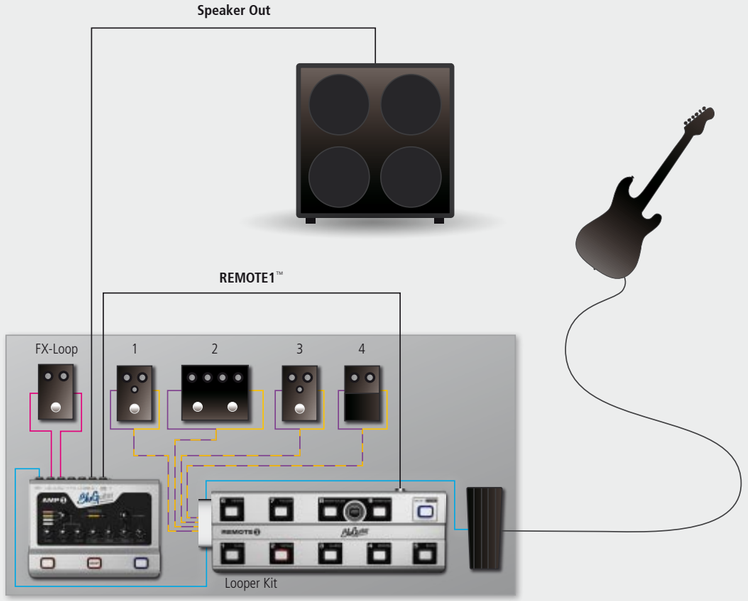
DIRECT ACCESS - MODE
This ***REMOTE1***™ mode enables the following convenient footswitch options:
CLEAN, **VINTAGE**, **CLASSIC**, **MODERN**, **BOOST**, **REVERB**, **FX-LOOP**, as well as **MasterVolume** and **PowerSoak**.

- **MasterVolume** expands your ***AMP1***™'s functionality by adding a controllable and footswitch-selectable second Master Volume.
- **PowerSoak** expands your ***AMP1***™'s functionality by adding a controllable and footswitch-selectable reduction in power.
- **LEVEL** controls the level of the previously selected function.

PRESET - MODE
In Direct Access Mode, every footswitch setting can be saved on one of the 36 Presets (which come in four banks of 9). Like this, you can save the same sound with different volumes and effects as rhythm and solo tones, for example. The Gain level is also controllable for each Preset, which opens up a lot of new sound nuances. With each Preset, a MIDI program change command is sent via the MIDI-OUT connector to switch external MIDI-enabled effects equipment. This way, you can control all of ***AMP1***™'s functions with a simple stomp of your foot, and switch a MIDI FX unit to your chosen Preset at the same time.

LOOPERKIT
For players who want to integrate their favourite FX pedals into the ***AMP1***™ guitar system, the optional Looper Kit extension, which features four true bypass relay loops, is available. The switching status of the Loops is saved together with the Presets. With just one stomp of the foot, ***REMOTE1***™ controls ***AMP1***™'s sound, the FX pedal in the FX Loop, and the four Loops simultaneously. This makes tap dancing on the pedalboard a thing of the past! Thanks to the four True Bypass Loops, the signal only passes through the FX units that are active within the specified Preset. This guarantees the shortest signal path, with as little sound loss as possible.

The pedalboard of the future!



With ***AMP1***™ it's possible to build a complete, programmable guitar amp and effects setup on your pedalboard for the first time ever. This doesn't just save on weight and extra equipment, but also significantly reduces the amount of cabling, which not only benefits your tone, but saves you an awful lot of time with assembly and clear-up before and after the gig!

1 **Overdrive** Channel
Selection between ***Vintage***, ***Classic*** and ***Modern***
Pages ***29-31***

2 **Nanotube**™
Sub miniature tube. *Page* ***24***

3 **MasterVolume**
Controls the overall volume of the 100-watt power amp.
Page ***25***

4 **Clean Volume**
Controls the Clean Channel's volume and drive. *Page* ***28***

5 **Overdrive Gain**
The GAIN knob controls the input sensitivity – and therefore the distortion – of the Vintage Classic and Modern Channels
Pages ***29-31***

6 **Overdrive Master**
Controls the overall volume of all three Overdrive Channels (Vintage, Classic and Modern), *Pages* ***29-31***. To regulate volume and tone between the three Overdrive Channels, use the **CUSTOM CONTROL**™ Classic Volume **27** and Classic Tone **28**, as well as Modern Volume **25** and Modern Tone **26**.

7-9 **Sound Control**
To regulate cabs, space etc. Sounds most balanced in central positions. If necessary, don't be afraid of extreme settings!
Page ***32***

10 **Reverb**
Regulates the volume of the added reverb signal. The reverb is modelled on the warmth and musicality of a classic spring reverb.
Page ***33***

11 **Clean / Overdrive Channel**
Here you switch between **CLEAN** and **OVERDRIVE**.

12 **Boost on/off**
The Boost switches a 2-level tube-like control in front of ***AMP1***™'s channels. You can control its intensity via **24**. *Page* ***33***

13 **Reverb on/off**
Switches Reverb on and off.

You can allocate your favourite sounds and recall them directly with the three integrated footswitches **11**, **12** and **13**. *Page* ***39***

AMP1™**'s channels:**
VOLUME determines the **CLEAN** Channel's volume and drive. **GAIN 5** controls the distortion, and MASTER **6** the volume of all three OVERDRIVE Channels. **MASTER** controls the overall volume of the power amp and therefore the volume of all the sounds.

14 Input
Connect your guitar to AMP1 here. Please only use suitable, shielded guitar cables!

15 FX-Loop Send
FX Loop between the preamp and the power amp. Connect this port to the input of your FX equipment. Also usable as a Line Out.
Page ***34***

16 FX-Loop Return
FX Loop between the preamp and the power amp. Connect this port to the output of your FX equipment. Also usable as a Line In.
Page ***34***

17 Rec Out
Output for headphones and mixers. For use exclusively with headphones, just don't connect a speaker. **MASTER 3** then determines headphone volume
Page ***26***

18 Speaker Out 8 Ohm / 100W
Please use only one of the Speaker Out ports at a time, using the right impedance. *Page* ***25***

19 Speaker Out 16 Ohm / 100W
Please use only one of the Speaker Out ports at a time, using the right impedance. *Page* ***25***

20 FOOTSW. / MIDI1 / REMOTE
Multifunction port for connecting: standard footswitch (single and double footswitch, with or without LED) for switching Clean/Overdrive (Tip) and Boost (Ring). *Page* ***36***

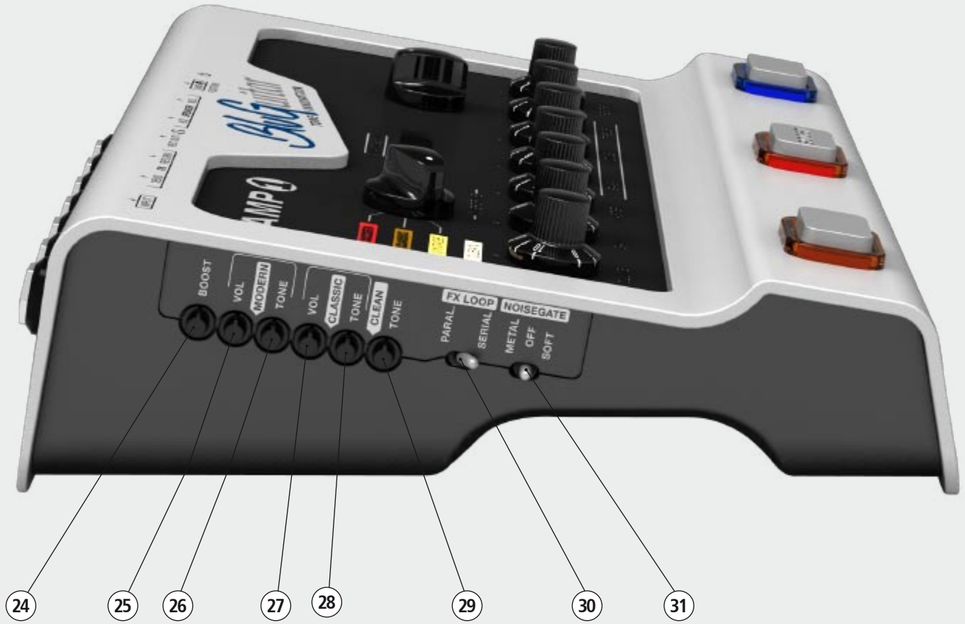
REMOTE1™ **or** ***MIDI1™*** **for switching:**

- CLEAN
- VINTAGE
- CLASSIC
- MODERN
- BOOST
- REVERB
- LOOP
- MasterVolume
- POWERSOAK
- GAIN / CLEAN Volume

21 On/off power switch

22 Mains plug socket
A modern switching power supply constantly provides all the internally required operating voltages, regardless of network voltage. This enables ***AMP1™*** to provide the exact same sound and performance anywhere in the world – without the need for additional adjustment. All you need is a suitable power cord with the country-specific mains power plug.

23 Fan
The regulated fans become are activated when ***AMP1™*** is used intensely. The openings must remain uncovered, to ensure that ***AMP1™*** can be properly cooled at all times.



Custom Contols - Customize your *AMP1*™

Voicing

All of ***AMP1***™'s channels – with the exception of the pure Vintage Overdrive Channel – feature infinitely adjustable sound filters that enable you to tune each channel's character individually. On top of that, there is a control for the individual volume of each channel.
In general: turn down ***AMP1***™'s tone control for more "fullness" on a singlecoil guitar, and turn the tone control up to experience more "bite and attack" on humbucker-equipped axes.

24 Boost Character
Gain Boost with tube character – left Clean with a subtle treble increase, right with light, inherent distortion for creamy lead sounds
Page ***33***

25 Volume Modern
Volume adjustment for Modern to match with Classic and Vintage.
Page ***31***

26 Tone Modern
From creamy, fat high gain to ultra modern metal.
Page ***31***

27 Volume Classic
Volume adjustment for Classic to match with Modern and Vintage.
Page ***30***

28 Tone Classic
From 70s British rock to modern "wall of sound".
Page ***30***

29 Tone Clean
From classic California Vintage Clean to Modern Sparkling.
Page ***28***

30 FX-Loop Switch
Serial/Parallel. *Page* ***34***

31 Noise-Gate Switch
Intelligent suppressor of unwanted excess noise. **SOFT** reduces noise, and **OFF** turns off the Noise Gate. Switching to **METAL** produces an ultra fast Noise Gate response with extreme damping, specifically for metal riffing with Modern and Classic. When changing to Clean and Vintage, the Gate is automatically switched to **SOFT**.
Page ***33***

All four channels can be easily controlled with just a 3-band EQ. As well as different tonal ideas, you can also adapt different types of guitar to your personal sound tastes.

NANOTUBE™

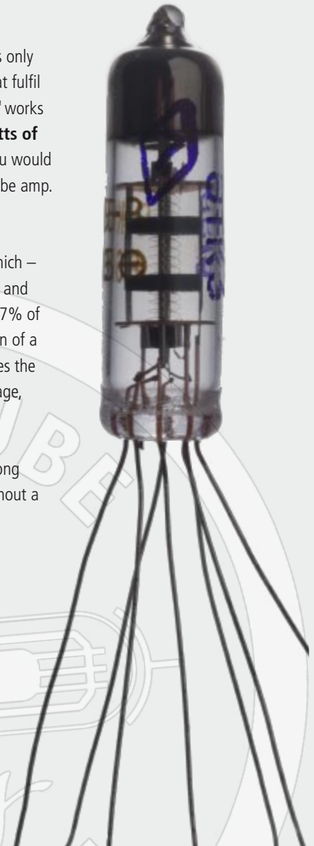
For decades, tubes have been the "sound makers" in guitar amps. However, every type of tube used up to now has had weaknesses, such as heat build-up, sensitive mechanics, short lifespans and – from an electronics viewpoint – their bulky size. While American technicians settled on semiconductors, their Russian counterparts re-examined and optimised the proven tube technology instead, to develop a completely reliable, shock-resistant tube to use for their space travel programme. These **sub-miniature vacuum tube** tubes were reduced in terms of size and weight, and consequently were more mechanically stable and noticeably more resistant to microphonics.

The **sub-miniature vacuum tube** is characterised by its lower noise levels at high input resistance and lower internal capacitance. This results in outstanding musical properties. It is clearly superior to conventional tubes in efficiency, energy consumption and reliability. Thanks to its mechanical strength, it can be constructed without a socket. It is firmly soldered in place, which eliminates any contact problems with the tube sockets. In comparison with classic tubes, **sub-miniature vacuum tubes** are almost "indestructible", and require no maintenance. This tube is rock 'n' roll and is ideal for hard use in strongly vibrating loud speakers or stage floors. It is the most technically advanced tube technology on offer today. However, until now, the **sub-miniature vacuum tube** has never been used in guitar amps. When it came to market, the zeitgeist – the spirit of the age – was different, with huge 100-watt tube amps in fashion.

BluGuitar® relies on Nanotubes™. This means only using selected vacuum sub miniature tubes that fulfil our extremely high standards. The Nanotubes™ works in the power amp and gives ***AMP1™*** **100 Watts of character**, **punch** and the **assertiveness** you would normally only get from a large 100-watt full tube amp.

The Nanotube lifespan:
The Nanotubes™ tube is a Russian creation, which – among other things – is used in the aerospace and aviation industries. The specification requires 97% of all Nanotubes™ tubes to have triple the lifespan of a standard ECC83 tube. In addition, ***AMP1™*** uses the Nanotubes™ at a slightly lower operating voltage, doubling the lifespan again.

This guarantees **NANOTUBE™** an extremely long lifespan, and for this reason is constructed without a socket. It should even outlive you!

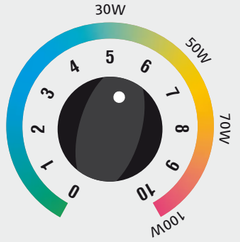


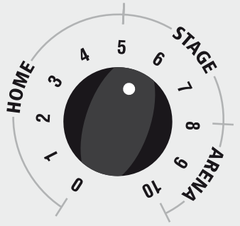
MASTER 3

Controls the overall volume of the amp with 100 Watts of power. ***AMP1™***'s power amp reacts just like a tube power amp. When it's pushed to the maximum, it will first go into saturation, and then into overdrive. Please make sure that the output power does not exceed the speaker's maximum power.

The output stage can be operated at full load without any problems. The fan will switch itself on automatically during periods of heavy usage to ensure that everything stays cool. The amp is also overload and short-circuit protected.

Warning: High volume levels can cause hearing damage and can destroy speakers.





MASTER: power range of the amp

Connecting to a guitar amp cabinet

AMP1™ provides separate outputs for the usual impedances of guitar cabs:

1 x 8 Output 18
1 x 16 Output 19

Only one speaker output must be used at a time!

Tip: Of course you can connect multiple speakers to one output simultaneously, even with different impedances. Usually, speakers are connected in parallel. If using two speakers with the same impedance, the overall impedance is always halved. If you have two 16-Ohm cabs, you have to connect them in parallel, and then connect to ***AMP1™***'s 8-Ohm output.

The cab impedance should not be lower than the output impedance of the amp, because ***AMP1™***'s power amp would otherwise produce more power than desired. If used for prolonged periods over full load, the amp may switch itself off due to overheating.

Recording Out

You can connect either headphones or mixing desks to this multifunctional port. An elaborate filter circuit simulates the sound of a guitar amp cabinet.

These days, there are lots of applications that require a good direct signal from a Recording Out. That's why ***AMP1***™ works with one of the most elaborate, fully analogue speaker simulations. A total of seven different filters simulate the tonal character of a guitar amp. The signal sounds open and fresh – without sounding scratchy – and delivers powerful bass, without "booming".
With such a large frequency spectrum, you can even fine-tune the Recording Out signal for every application – because removing certain frequencies often sounds a lot more musical than adding frequencies. This way, you always get your perfect, consistent sound, directly into the PA or for recording.
(More tips on Pages ***46-47***)
.

In-ear quality

These days, in-ear monitors are often used on stage to improve a band's sound. For this, the Recording Out signal is sent to a mixing desk, where it is mixed with the other instruments. This mix is then sent to an in-ear system. By using this elaborate speaker emulation, you get an authentic and constant guitar sound in an in-ear monitor system, which – in contrast to a miked sound – never changes.

Kai Sonnhalter

Connecting headphones

Connect headphones with a 6.3mm stereo jack through output **17**. ***AMP1***™ automatically activates a headphone amplifier when loudspeaker ports **18** and **19** are not in use.

You regulate the headphone volume with the **MASTER 3** control.

It is advisable to use some reverb. If you do, the guitar will sound a lot more natural through the headphones, and you'll have more fun playing.

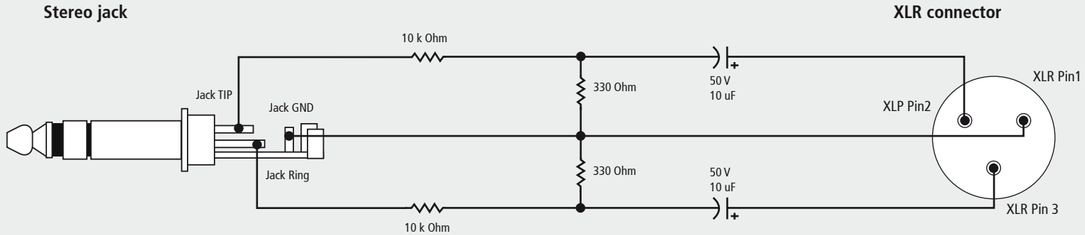
Connecting to a mixing desk

Connect **RECORDING OUT 17** with a guitar cable or stereo jack cable with the mixing desk's Line In. The stereo jack provides a symmetrical signal, which delivers a better signal if you're using a cable longer than 10 metres. If you want to use your mixing desk's microphone input, you'll need to adjust the level with an adapter (see image below).

The signal level is directly dependent on the **MASTER** and **PowerSoak** (if activated) settings.

Silent Recording

AMP1™ provides a well-balanced recording signal for silent recording without a loudspeaker. Because ***AMP1***™'s power amp reacts to the loudspeaker (current feedback), the recording sound changes if you use a loudspeaker. You can hear the difference even when using quieter Master settings. When you're connected to a loudspeaker, the sound has less mids and more bite.



Schematic for constructing an adapter to connect to a microphone input – with phantom power protection.

CLEAN 1

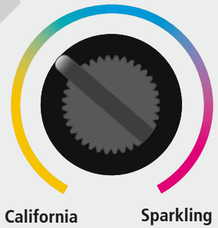
The **Clean Channel** delivers a wide spectrum of crystal clear (**VOLUME** up to 5) to dynamically reacting, lightly overdriven tones. In principal, it works like a classic California Clean amp with a 'Bright' switch. The more the volume is turned down, the more transparent and HiFi-like the Clean Channel sounds. For my tastes, clean sounds are at their best just before you can hear the signal starting to break up. The output factor from single coil pickups to active humbuckers varies up to a factor of 10! Because of this, there is no perfect Clean Volume setting that works for all pickups. To find your own clean sound, first turn your clean volume to about 6 – depending on your pickups, you may already hear noticeable amounts of overdrive – and then turn it down until the tone becomes clean enough for your tastes (for single coils, this would normally be 5-6, for humbuckers 3-5).

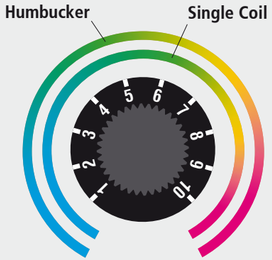
If you turn the Boost up more, the tube-like boost circuit will go into overdrive. This way, you can use the Boost to switch between clean and lightly distorted sounds. If Boost and Volume are both fully turned up, this Channel will also deliver dynamic vintage lead sounds. For experts, there's an additional trick: the possibility to drive the power amp into saturation or overdrive, and using the **PowerSoak** (which you can only activate via ***REMOTE1***™ or MIDI) to turn the volume down to suitable levels. This gives you the possibility to create very special sounds, like we know from the Guitar Heroes of the 60´s and flower power era. This way you can do exactly what those artists did: they turned their clean amps up until the power amp was compressed or distorted.

CLEAN

CLEAN-TONE 29 allows silky warm (backed off) and brilliant, glittery high (turned up) cleans for single coils and humbuckers. The Clean Channel can also be overdriven, which means it can deliver perfect sounds from blues to classic rock. The Clean Channel is also ideal for combining with FX pedals like boosts, overdrives and compressors.

By switching on the internal **BOOST**, you can enormously expand on the tonal spectrum of the Clean Channel. If you have the Boost on at the minimum level, you'll get fine, shimmering highs. This can really freshen up humbuckers, or produce those ultra-clean "straight into the mixing desk" single coil tones.





Tonal colour and overdrive of the Clean Channel.

VINTAGE 1

Classic British overdrive. This Channel covers the versatile sonic spectrum between almost clean and distorted sounds, ideally suited to anything from blues to AC/DC. Full gain with boost is my trademark sound. I personally control my gain with the volume pot on my guitar.

This purist Overdrive Channel, with its fat and dynamic distorted character, cannot be edited by ***AMP1***™'s **CUSTOM CONTROL**™, as it would lose its character. The 3-band EQ should be enough to adapt this sound to your speaker and the room. In contrast to the **Classic Channel**, Vintage features some compression, as you know from those classic cranked amps. If you want to increase the effect even more, use the **PowerSoak**.

Combined with **BOOST**, you get expressive, creamy rhythm and lead sounds. If you turn down the **CUSTOM CONTROL**™ **Boost**, you'll get "woody" lead sounds; turn it up, and the lead tone is "creamier".

The Vintage Channel delivers the good old honest **TONE** of rock 'n' roll. Vintage responds to every playing nuance. It reveals the differences between every pickup and guitar, and also lets you control the sound with your volume pot.

Tip: *For lightly distorted riffs, I recommend settings between 5 and 7 for single coil pickups. If using high output pickups – like humbuckers or active pickups – you should test settings between 3 and 5. If you push the gain control way up past 7, you can produce beautifully fat "power crunch chords" and classic lead sounds.*

Fig. 1: Boost Custom Control

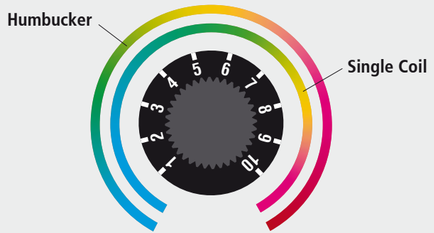


Fig. 2: optimal gain in the Vintage Channel.

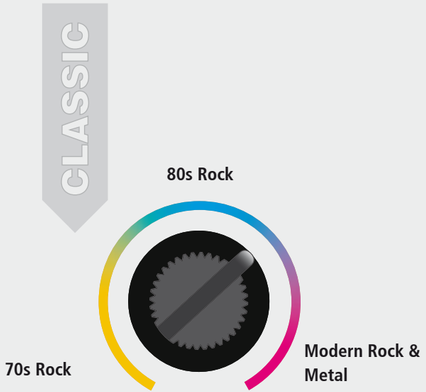
CLASSIC 1

This "Brown Sound" is punchy, dynamic, elegant, clear and balanced in all frequencies, and has all the necessary tight power and aggression for all kinds of rock riffs. The sound cuts through the band without getting annoying or grating. Even with single coil pickups, there's plenty enough Gain on tap for creamy solo sounds and rock riffs.
You can also use the **BOOST** to increase the Gain. The extra overtones provided by the Boost give the **CLASSIC** Channel a rich, singing tone. With the **PowerSoak** (***REMOTE1***™) , you'll get more compression and soft overtones. In this way, you can fine-tune ***AMP1***™'s **CLASSIC** Channel to sound like a "vintage" guitar amp.

The **CUSTOM CONTROL**™ **CLASSIC TONE 28** shapes the character of the channel's overtones and basses. Turned down, it creates woody, creamy 70s sounds, and turned up, it results in hard, cutting, modern tones with more bite. With **CLASSIC VOLUME 27**, you can match the volume level to the Vintage Channel.

In combination with the Boost, you can also get musical high gain sounds from this Channel. This makes legato and tapping playing techniques possible on any guitar. At low gain settings, the Channel also provides open, well-rounded crunch sounds. Use more Gain to get a "hot-rodded" sound (or Brown Sound), just like you know from boutique amps.

Tip: *Use your guitar's volume control to coax out cleaner sounds (backed off) and rich, overdriven tones (turned up) from this Channel.*



*Using **CLASSIC TONE**, you can dial in this Channel to your personal taste to anything between the woody, rough sounding tones of the 70s and the rich, modern sounds of a hot-rodded amp.*

MODERN 1

This Channel delivers American high-gain sounds with tight basses and gripping highs, thanks to its thick and rich overtone spectrum. The primary focus of Modern is quick response and a very precise tonal resolution at high gain levels.

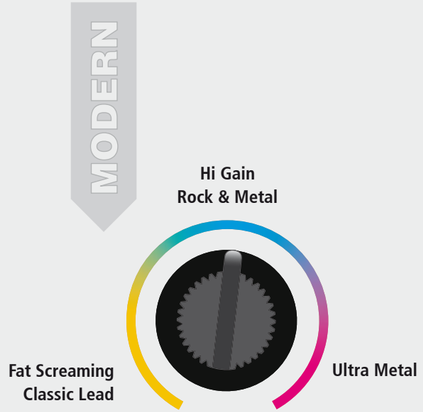
The **MODERN Channel** delivers a merciless performance not just suited to aggressive metal riffs (**MODERN TONE** turned up). Thanks to the direct response, drop tunings become a great experience without going all muddy. This Channel is also an interesting alternative for guitarists who are looking for ultra-rich, creamy lead sounds. All this is possible thanks to **MODERN TONE's 26** (turned all the way down) flexibility. Using **MODERN VOLUME 25**, you can match the volume to the volume of the other Overdrive Channels.

Tight basses, combined with rich gain, are a basic requirement for modern rock and metal riffing. Classic amps fail in this regard, because their response is often too slow and muddy.

AMP1™'s newly developed circuit design delivers a dry, direct tone without altering the guitar's basic sound. This revolutionary concept is the foundation for sounds that can also cut through the mix in a band context. The new circuit, which features "tight and fat" gain stacking, is even capable of conjuring up extra tight sounds from classic single-coil guitars. A metal guitar will sound like metal guitar, and a classic vintage guitar will also be recognisable.

Tips: *To get even tighter aggressive metal riffs, the Gate **31** should be set to Metal. Then, when you dampen the strings while using the Modern Channel, all unwanted noise will be removed through the fast-acting Noisegate. This will make the riffs super hard and dry.*

*When **MODERN TONE 26** is turned all the way down, Modern even provides creamy tones for fans of classic overdrive sounds.*



The CUSTOM CONTROL™ tone selection offers a broad spectrum, from rock and metal to doom.

BASS 7 MIDDLE 8 TREBLE 9

For ***AMP1***™, we have developed a special set of tone controls that allow all four Channels to be used to optimum levels with a shared EQ. The effects of the tone controls have been precisely tuned to the Channels, making a wide range of tonal nuances possible. Within each Channel, the tone controls access specific frequency ranges that are characteristic to the selected Channel.

In contrast to more conventional tone controls, ***AMP1***™'s controls do not influence each other. **That means that boosting the highs does not result in a cut in the mids – and vice versa**. This makes tailoring your own perfect sounds considerably easier. Setting the controls to the centre position provides – depending on the speaker, room and your tonal tastes – a balanced frequency mix that you can start from before refining your sound.

If you want to fundamentally change the tonal character of a channel, use the relevant ***CUSTOM CONTROL***™ on the side of ***AMP1***™, which was specifically developed for this purpose. This will help you a lot when playing – because if you change something on the tone control, for example if you want some more mids, you'll end up with more mids on all of the channels. I put a lot of time and practical testing into fine-tuning the channels, to make sure everything fits together naturally. (Also see Academy of Tone, pages ***42-47***)

Tip: To get to know the amp and its basic sounds, I recommend that you start off with all the tone controls in the centre position. Settings where all the knobs are similarly positioned, like 7-7-7 or 9-9-9, also result in more balanced tones. The higher you turn the controls, the more open and more modern the resulting sounds.

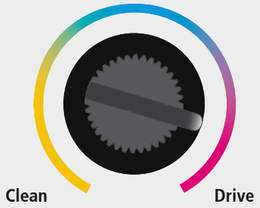
ATTENTION: The controls' working ranges are designed to be very effective. When all the controls are set to 0, there won't be any sound!

BOOST 12

The Boost activates a 2-level tube simulation in front of ***AMP1***™'s channels. With the boost control **24**, you can regulate the tonal character from transparent to creamy with "inherent distortion". Depending on the channel, this makes more transparent, creamy or even aggressive tones possible.

Tip: *For stronger pickups with higher outputs, you'll get light overdrive with the Boost turned to halfway, which will make the tone in OVERDRIVE singing and creamy. On the other hand, if you want ultra-brilliant and pure clean sounds, it's advisable to keep the control turned less than halfway up.*

*You can activate the Boost with switch **12** or with a double footswitch (ring), and also via MIDI and **REMOTE1**™.*



Boost Custom-Control

NOISE GATE 31

The integrated **NOISE GATE** is an intelligent suppressor of unwanted excess noise. Compared to external noise gates, ***AMP1***™'s evaluates the signal at several points in the circuit simultaneously, in order to react as sensitively as possible.
This way, the **NOISE GATE** automatically and intelligently adapts to the channels and their gain settings, so that as little signal as possible is lost.

Switch **31** offers three possibilities:

SOFT - for all classic guitar sounds. On this setting, the signal is kept intact as much as possible, with unwanted noise only being removed when you're not playing.

OFF - this deactivates the gate.

METAL- ultra-fast and hard gate responsiveness, with extreme damping. This setting is ideal for high-gain metal riffing. This setting is only usable on the Modern and Classic Channels. When using Clean and Vintage, the Gate is automatically switched to SOFT, so no clean sounds are lost.

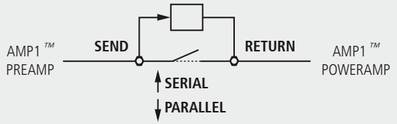
REVERB

AMP1™'s digital reverb was modelled on a classic spring reverb. Using Volume **10**, the reverb level is added to the dry signal. It is especially suitable for traditional clean sounds. It's also advisable to use a bit of reverb when practicing, especially if you're using headphones.

FX Loop

The FX Loop can be used in serial or parallel mode (Pic. 1) **30**. In serial mode, the signal passes completely through the FX unit. In parallel mode, the FX signal is mixed with the direct signal. Modulation effects, equalizers and compressors must be used in series in order to function properly. Of course, the sound quality depends on the quality of the effects unit(s) themselves.
There are some FX units, like Delays, with which you can control the ratio of the effect level and the dry level yourself. These effects should then only provide the pure effect sound, and be used in PARALLEL **30**. This way, ***AMP1™***'s analogue tube sound will not be interrupted at any point, resulting in optimal sound quality.

You can switch between serial and parallel modes by using the **CUSTOM CONTROL™ 30**.



Pic 1. Serial and parallel mode.

FX Loop Level

On ***AMP1™***'s underside you will find a recess with a small pressure switch, which enables you to switch the sensitivity between -10dB (for foot pedals) and +4dB (for studio FX).

FX SEND 15

Effects Loop between the preamp and power amp. Connect the input of your FX unit to this port.

FX RETURN 16

Connect the output of your FX unit to this port.
The FX Loop can be activated ort deactivated (bypass) via ***REMOTE1™*** or ***MIDI1™***.

Tip:
*The FX Loop can be switched on and off, and presets can be saved, via **REMOTE1™** or MIDI in. This way, you can activate the desired channel and the FX Loop simultaneously.*
If you are using a MIDI-enabled FX unit, you can change your effects program via MIDI at the same time. For example, you can save a CLEAN sound with chorus and reverb as a preset, or a dry, CLASSIC rhythm sound without any FX, or a MODERN solo sound with delay, and each can be directly recalled with one simple tap of the foot switch.

More on programming presets on page ***37***

Pic 2. Recess with FX Loop level switch

What else you can do with the FX Loop…

If no effects device is looped into the FX Loop, you can use the FX Loop for different, unconventional things:

***AMP1™* as a preamp**
The Send port can also be used as a Line Out. Here you could, for example, connect another power amp.

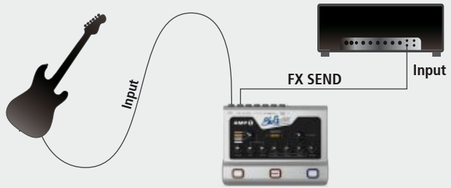
***AMP1™* as a power amp**
The Return port also doubles as a Line In. Here, you can connect a preamp. The input sensitivity can be switched from 200mV to 1 Volt by using the **FX Loop level switch** on the bottom.
The power amp behaves like a tube amp, because the signal passes through the tube. If using ***REMOTE1™***, you can also use the **PowerSoak** function.

***AMP1™* as a boutique distortion pedal**
You can go directly into a guitar amp from the **SEND** port. It is advisable to set the amp to clean. You should also reduce AMP1TM's Treble and Overdrive volume, because the **SEND** signal has a very high output level (Pic 2.) So you don't overdrive the input, the **FX Loop level** on the underside of ***AMP1™*** should be set to -10dB.

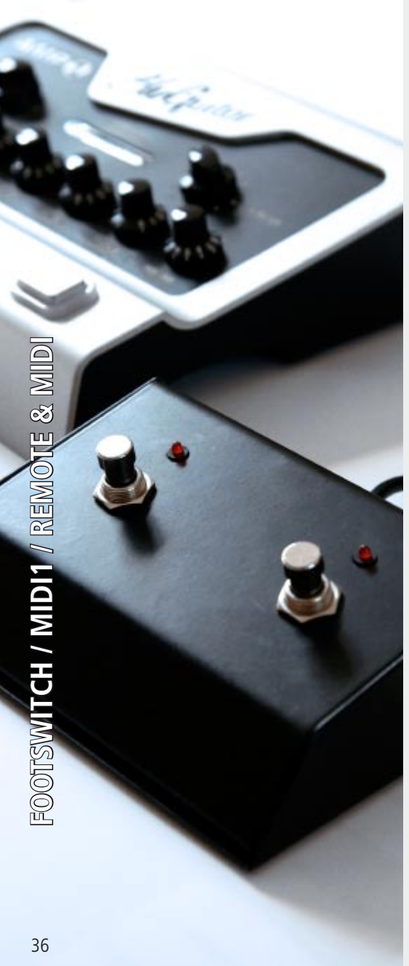
***AMP1™* with a volume pedal**
If you place an analogue volume pedal between **SEND** and **RETURN**, you can use it to conveniently control ***AMP1™***'s overall volume without changing the basic sound. This is a very handy feature, especially when playing live onstage (Pic 3.).

Pic 3. Volume pedal as Master Volume

***AMP1™* with additional audio sources**
A second instrument or audio source (for example an MP3 player) can be connected to the **RETURN** port in parallel mode (Pic 4.).



Pic 4. MP3 player in parallel mode.



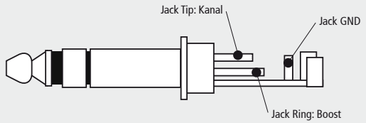
FOOTSWITCH / MIDI1 / REMOTE 20

Port for both conventional single or double footswitches, and also for ***REMOTE1™*** – the foot controller that was specially designed to go with ***AMP1™*** – and the MIDI IN adapter ***MIDI1™***. ***AMP1™*** automatically detects which kind of footswitch or interface is connected! With a single footswitch, you can switch between Clean mode and the Overdrive channel, which is available via the Overdrive selector switch **1**. With a double footswitch, the boost is also switchable.
When ***REMOTE1™*** and ***MIDI1™*** are connected, this jack port automatically becomes a serial data input that controls all of ***AMP1™***'s switching and control functions.
REMOTE1™ or ***MIDI1™*** enable you (in conjunction with a MIDI controller) to switch the functions **CLEAN**, **VINTAGE**, **CLASSIC**, **MODERN**, **BOOST**, **REVERB**, **FX-LOOP**, and additionally to control **MasterVolume** and **PowerSoak**, as well as **CLEAN VOLUME** and **GAIN**. To connect ***AMP1™*** with ***REMOTE1™***, simply use a standard mono jack cable (for example a guitar cable or speaker cable).

NOTE: Apart from (passive) standard footswitches (with and without LED display), you may exclusively connect the BluGuitar® *REMOTE1™* foot controller or BluGuitar® *MIDI1™* adapters to this 6.3mm stereo jack port. Connection to another foot controller may cause defects to this controller and/or to *AMP1™*'s internal electronics.

ATTENTION: The connecting cable should generally only be plugged in/removed when the amp is switched off, in order to prevent faulty switching on the amp.

Configuration of the Remote stereo jack port



MIDI1

If you want to build an individual programmable guitar system using the MIDI controller of your choice, you can control ***AMP1™*** using the **BluGuitar® *MIDI1™* adapter interface**.
This turns ***AMP1™***'s remote port into a MIDI In port. This allows you to recall all of ***AMP1™***'s switching functions via MIDI program change commands. Additionally, control change commands CC 007 (**Master-Volume**), CC 020 (**Gain**) and CC 030 (**PowerSoak**) are also received. You put ***MIDI1™***'s **adapter interface**'s port into ***AMP1™***'s **REMOTE** port: on the opposite end is a 5-pin DIN socket for the **MIDI IN**. The interface electronics are powered by ***AMP1™***, meaning that no extra power supply or cables are required.

Every available switching possibility on ***AMP1™*** can be recalled via MIDI programm change commands, when the corresponding command is sent from MIDI Channel 1. You can create up to 128 presets by **"MIDI-Learn"** assigning.

Select your setting on *AMP1™*
While the ***MIDI1™*** **adapter** is plugged in, **MIDI-Learn** is activated when holding the **BOOST** switch for a few seconds. Now fast blinking of the **REVERB** LED indicates that ***AMP1™*** is waiting for MIDI programm change command.
When sending any MIDI programm change command within the next 10 seconds, the setting is stored. The **REVERB** Led stops blinking. Anytime this MIDI programme change command is send, ***AMP1™*** switches to the desired state.

MIDI RECEIVE CHANNEL: 1

128 Programm Change Befehle
MIDI Programm Change Nummer: 000 - 127

MIDI CONTROL-CHANGE:

Master:	**CC 007**
Gain:	**CC 020**
PowerSoak:	**CC 030**

REMOTE1™ - the programmable footswitch with MIDI

REMOTE1™ is designed to be a convenient remote control for ***AMP1™***.

"Direct Access Mode" (Mode Switch is not lit)
*The incredibly convenient remote control for your **AMP1™**.*

Every switch on the foot controller is assigned to one of ***AMP1™***'s functions. Now you can directly select the **CLEAN**, **VINTAGE**, **CLASSIC** and **MODERN** Channels as well as switching **BOOST**, **REVERB** and the **FX-LOOP**. In addition, ***REMOTE1™*** expands the functions of your ***AMP1™***, with a second controllable **Master Volume** and a controllable and switchable **PowerSoak**. A standard jack cable (guitar or speaker cable) connects ***AMP1™*** and ***REMOTE1™*** and powers the system.

"Preset Mode" (Mode Switch lights up blue)
A fully programmable guitar system

REMOTE1™ offers 4 banks, each with 9 memory locations, on which you can save your own, preferred sound settings. Each channel can be freely combined with or without **BOOST**, **REVERB**, **FX-LOOP** and any desired **MasterVolume** and**PowerSoak** level, which can then be stored to one of the presets. This allows you to save the same sound e.g. as rhythm and solo sounds with different volume levels.

For each switching state, ***REMOTE1™*** simultaneously sends a program change command for switching external MIDI effect devices via its MIDI out port (see table on page ***37***). This turns ***AMP1™*** into a programmable MIDI guitar system.

LOOPERKIT™ (optional extension module for connecting effects pedals)

Those who want to program their favourite guitar pedals with ***REMOTE1™*** to avoid pedalboard tap dancing should use the ***LOOPERKIT™***, which features four true bypass relay mono loops. The True Bypass wiring ensures optimum signal quality. The four Loops can be individually assigned to each preset, thereby combining the connected effects with the amp settings.

The Looperkit is fixed to the side of ***REMOTE1™*** with a screw. External pedals are wired through a breakout box.

Note: If you want to use ***REMOTE1™*** to directly switch the Presets of a device that is directly connected via the MIDI Out, the table on page ***37*** shows you the program change commands that are sent from ***REMOTE1™***.
As each of ***AMP1™***'s switching states is assigned a MIDI program change command (see Table), you have to assign each switching state its own Preset at the FX unit. In order to make assigning these more comfortable, almost all FX devices have built-in MIDI Mapping. The advantage for you is that you always have the right FX program for your sound (switching state ***AMP1™***), no matter on which Preset this sound is situated at that time. Please also note that some MIDI devices switch, for example, Program 1 via the program change command 0. Via MIDI Mapping in your FX device, you have to then add a 1 to this Table, in order to activate the desired program.

Assign your favourite sounds to the footswitches

You can use ***AMP1™***'s integrated footswitches in two different modes: Standard or Personal Preset.

Standard-Mode:
In Standard Mode, the left footswitch always switches between **CLEAN** and **OVERDRIVE**. The middle switch switches the **BOOST**, and the right switch the **REVERB**.

Personal Preset Mode with three Presets:
In addition, you can freely assign three of your most loved sound settings from **CLEAN**, **VINTAGE**, **CLASSIC** and **MODERN** – including **BOOST** and **REVERB** – to your ***AMP1™***'s footswitches. The settings are stored, and will even remain available if you turn the power off. The Personal Preset Mode is exceptionally handy when you prefer to play with only three different sounds, or if you want to work without ***REMOTE1™*** or an additional MIDI board. The factory default setting is programmed as follows:

Recalling the Preset Mode:
Switch off your ***AMP1™***. Then switch it on again while pressing down the **REVERB** footswitch. Now your previously saved settings will be assigned to the three footswitches. Note that the footswitches' LEDs now show the active sound functions, not which footswitch is active. To change back to Standard Mode, switch off your ***AMP1™*** and then switch it on again while pressing down the **REVERB** footswitch.

Programming your own Presets:
If you wish to change the default factory programmed sounds in Personal Preset Mode, first select your desired sound, e.g. **VINTAGE** with **BOOST** and **REVERB**. Then hold down the REVERB footswitch for three seconds. The **REVERB** footswitch will start flashing. Now, by pressing down on one of the three footswitches, you can store your sound to that footswitch. In this way, you can add two more sounds to the two remaining footswitches.

BONUS: Four Channels and switchable Boost
In addition, in Preset Mode you can also use a standard double footswitch to switch between **CLEAN** and **OVERDRIVE**, giving you an additional **CLEAN** channel when the three internal footswitches are assigned with **VINTAGE**, **CLASSIC** and **MODERN**.
The second button on a double footswitch turns the **BOOST** off if it was originally selected in the Preset, or on if it wasn't. In this way, I have all four Channels in my mini setup directly available!

2ND MASTER

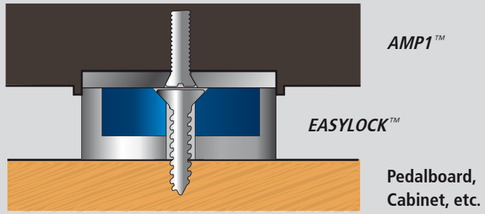
In connection with ***REMOTE1***™, a 2nd Master Volume is available. You can activate this via a footswitch, and control it within a 10dB range. This will let you use all your different sounds at two different volumes. Classically speaking, that would be rhythm and solo volumes!

For this, you activate the **"MasterVolume"** button on ***REMOTE1***™, and the knob directly next to the button will become active. Then, using this knob, you can control the MasterVolume. Pressing the ***REMOTE1***™ **"MasterVolume"** button again will take you back to the first **MasterVolume**.

REMOTE1™ can also save all of your settings to one of its nine Presets. This way, you have the possibility to save any of your sounds' volumes in Preset Mode.

EASYLOCK™

For fixing your ***AMP1***™ to a pedalboard. The set consists of two magnets, which are screwed on to the board, and two magnetic counterparts that you screw to your ***AMP1***™. In this way, you can take ***AMP1***™ off your pedalboard at any time and easily transport it in your gigbag at those times when you don't want to lug around the whole shebang.



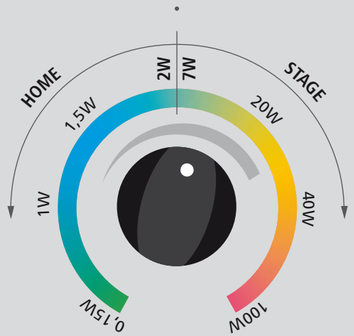
Fixing EASYLOCK™ via a woodscrew.

PowerSoak

In connection with ***REMOTE1***™, a 2-stage **PowerSoak** is available

The **PowerSoak** was invented so that the sound of a fully saturated tube amp could be reduced to tolerable levels. The "lively" sound of a tube power amp set to maximum gain and overdrive is very popular. Most **PowerSoaks** use thick power resistors to convert the high power at the speaker output into heat. With classic **PowerSoaks**, the sound gets more deadened, the more you decrease the volume.

AMP1™'s **PowerSoak** works in a completely new, very sound neutral way, and without any power resistors. When **PowerSoak** is activated, the **LEVEL** control reduces the power amp's power rating smoothly. For this, the standard routing has been divided into two ranges, the 100% sound neutral **"STAGE"**, and the somewhat milder sounding **"HOME"**. After the centre position on the **LEVEL** control is reached, the **PowerSoak** switches automatically from **"HOME"** to **"STAGE"**.
In order to make the **PowerSoak** responsive, the power of the power amp at the Master must obviously be higher than the chosen power reduction of the power amp. That is: crank the Master and reduce it again with the **PowerSoak**!



AMP1™'s **PowerSoak** works in two ranges:

Home from 150m Watts to 2 Watts
Stage from 7-100 Watts

Power ranges with PowerSoak

Your tone in the band

I want to use these pages to give you some tips on how to sound better – and more at home – in your band. In short, how you arrive at 'your' tone. A tone that sounds great in your living room at low volumes will generally not work in a band context. Why?

Well, it's because many instruments are being used simultaneously in the band. Their frequencies all overlap, and only the distinctive parts of the sonic spectrum will come through.

Indeed, there are loads of different roles in bands, so the "frequency soup" differs depending on the group.

That said, most bands don't just have bass and drums, but more common features that we have to take into consideration in order to master any situation.

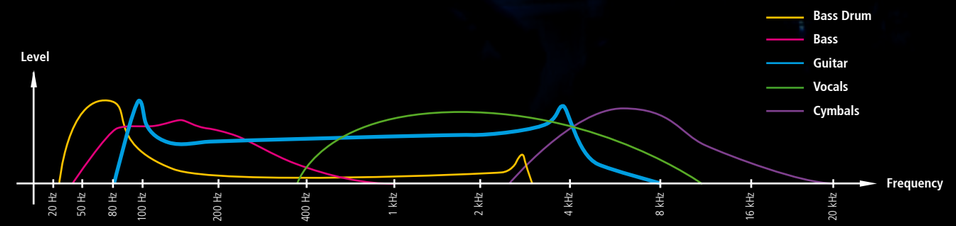
For me, AC/DC is a great example of how a band's sound works. With two guitars, bass, drums and vocals, you get the feeling that this is a band whose guitars always sound amazing.

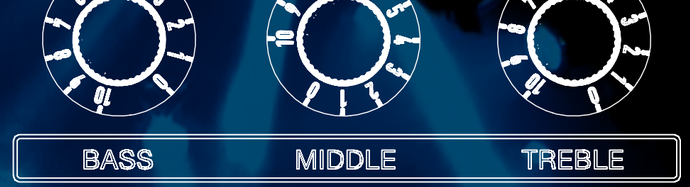
The reason for that is simple: the two guitars have plenty of space because all the other instruments are secondary to them and give them plenty of room, frequency-wise, in the mix. AC/DC's sound was probably created and refined through trial and error in the rehearsal room. So you can see that every great sounding group has developed their own recipe for their own band sound, and you'll find that in every genre – from jazz to metal.

Not enough Mids

Sounds that you've created at home (i.e. on your own, without fellow musicians) just don't cut the mustard in a band context. Tones that sounded fat, bold and aggressive when you were playing at home use exactly the same frequencies as the bass and drums, and so won't stand out at all.

Tip:
*Use less Bass. Turn the Mids up, and even decrease the Highs to experience a different sort of High with **AMP1™**'s **CUSTOM CONTROL™**.*





You'll still need to make sure these agree with the other instruments in the band, though.
Hint: *The classic EQs on guitar amps make the Mids disappear when you turn the Highs up, and add Mids when you decrease the Highs.*

*In contrast, the controls on **AMP1™**'s 3-band EQ do not influence each other. This makes searching for the best sound settings much easier. The EQ should be used for adjusting to speakers and space, and for setting the basic character of the channels, it is better to use the Custom Controls. Once you've found a great tone, you can remember the settings like a numerical code. My code is 5-5-5 (Bass-Middle-Treble).*

Chiming Highs:

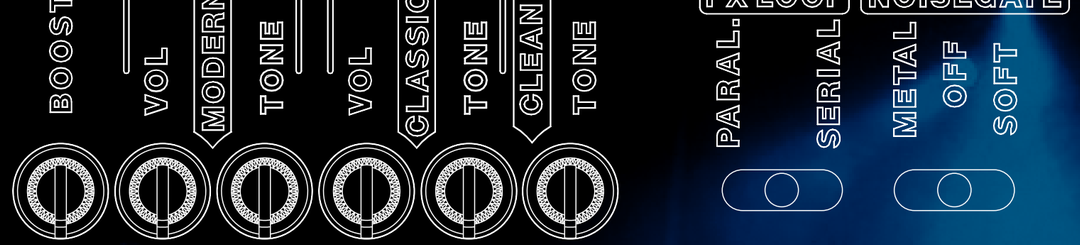
In a band context, clean tones often sound too thin. Because of the overlap of Mids from the other instruments, the only Highs we hear are piercing. Here, it can often help simply to turn up the Mids or backing off the Highs. For ***AMP1™***'s **CLEAN** Channel, I designed a special Character Control that allows you to enjoy the stable Mids you know from classic guitar combo amps. To access it, just turn the ***Clean Tone*** **29 CUSTOM CONTROL™** anticlockwise – depending on your speakers, of course, you might want to turn it up a bit more. The Middle control should not be at less than 5.

Thumping bass vs. smaller tones

It often happens that the bass and guitars are using similar frequencies. This can lead to rumbling and throbbing sounds. Test things out a bit, and try turning your Bass control up and down in a band context. If nothing's rumbling, then you can play with plenty of bass. This'll make the guitar sound bigger…

If your bassist allows it, try turning his 120Hz control down. Any rumbling should disappear completely, and you'll have a super fat tone!
To get a better feeling of frequencies and how they overlap, you can also try playing your guitar along to a backing track. You should set your amp up so that it sounds good with the backing track and cuts through the mix.

When the backing track stops, you might be surprised at how your dry tone sounds. It should be noted that the recorded signal – in comparison with a live band, whether onstage or in the practice room – will have been thinned out, and the frequencies processed, at the mixing stage. It's worth experimenting with the tone controls on occasion, until you find your perfect sound for your situation (be that in the band or recording at home).



Mastering different sounds

Modern amps often let you save a range of different sounds that can then be accessed by footswitch. When the need arises, and with skilful use, this variety can really enrich a band's sound. Right now, such a wealth of sounds is in demand with guitar players in cover bands, who need to be able to accurately reproduce the widest variety of music styles authentically. From personal experience, I can say that a small but perfectly functioning set of sounds is usually better than an elaborate tap dance on the pedalboard. On top of that, each sound requires a different playing style, and each of these has to be mastered first. It takes a long time for a player to really get to know the varied playing styles, and to be "in control" of the numerous sounds and playing techniques. Because of that, you shouldn't get too stressed – you want to focus on actually playing the guitar, and not on chasing as many sounds as possible.

While watching some live bands I've noticed how the guitars simply disappear when the rest of the band starts playing too, even though the players on stage can still hear their own sound loud and clear. In particular, the channel switch between Overdrive and Clean – which is something virtually every player uses – seems to cause problems. The reason for this is very simple: the frequency spectrum varies too much. While the Clean sound works, the Overdrive sound disappears – in this case, lots of the Mids are normally missing. If the Overdrive sounds full and fat, but clean tones are thin, then there's too many Highs and, at the same time, too few Mids. Tones that sound amazing when the guitarist plays unaccompanied often sound thin and lack substance in a full-band context.

Stompboxes and overdrive pedals have never been more popular. The main reason for this is that they actually work! If you run a pedal through a clean or slightly overdriven amp, then the frequency settings you've chosen on the amp will remain largely and noticeably intact and audible. The main reason for this is that you don't need to change the tonal settings on the amp at all. The sound changes from the pedal stay within the acceptable range, without changing the frequency spectrum of the amp.

***AMP1*™** 's four channels were constructed separately and were optimally matched to each other in terms of frequency. With the effective 3-band EQ, the overall sound can be quickly and easily adapted to suit your amp cab and your band's sound. The biggest advantage of this is when playing live, where you would otherwise have to adjust four tonal settings. Using the **CUSTOM CONTROL**™, you can add nuanced timbres to each individual sound. For me, ***AMP1*™** 's Vintage Channel is the reference point to which I adjust all my other sounds. You can also achieve beautiful clean sounds through this channel by backing off the volume pot on your guitar.
To make the sounds match perfectly, I first select the **VINTAGE** Channel, and then switch to the **CLEAN** Channel. Then I use **CUSTOM CONTROL**™ Clean Tone to adjust the sounds to each other.

***AMP1*™ CUSTOM CONTROL™ TONE:**
When you turn the **CLEAN TONE** anticlockwise, you'll get the typical "Californian" clean sounds for country and funk, with plenty of fullness in the Mids. This works particularly well with single coil pickups. If your guitar has humbuckers and you want pearly clean tones, use it in "split coil" mode or turn the **CUSTOM CONTROL**™ clockwise. With the Clean Tone turned all the way down, most humbuckers will deliver balanced, warm, rounded jazz tones.

If you turn the **Classic Tone** control anticlockwise, you'll get classic sounds, while turning it clockwise will result in more modern tones. I would advise you to turn these down slightly if you're using single coils, or up a bit if you're using humbuckers. **MODERN TONE** is a totally extreme control, which will give you two completely different – and seemingly incompatible – tonal options. Turned down, you get creamy, warm, singing Classic Lead Sounds that don't grate at all – in the style of Gary Moore or Eric Johnson. Turning it up gives you the exact opposite: the world of metal, featuring ultra-modern metal sounds with extreme amounts of bite and dry bass that'll make classic rock fans' hair stand on end, but will bring a massive smile to the faces of metalheads. Here, you must show your own colours!

Home & Recording

Home

At home, what you want is as vibrant and full a sound as possible at living room levels. With ***AMP1™***, a single 1x12 cab will do the job (Nano CAB or FAT CAB). If you just love the punch and overtones of a howling tube amp, you'll need a **PowerSoak** to tame the volume levels. Using the ***REMOTE1™*** foot controller, you can operate AMP1TM's integrated **POWERSOAK** within the home from anywhere between 150 mW and 2 Watts.
If there's no guitar speaker available, you can connect your headphones or home stereo to ***AMP1™***'s Recording Out port. **Be careful with the volume levels, though!**
The Recording Out simulates the sound of a guitar speaker with a very elaborate 7-stage analogue filter circuit. In contrast to digital solutions, the signal is never converted, and therefore has a super quick response, with no latency.

Recording

There are many options available to you if you want to record with ***AMP1™***. The simplest is to use the Recording Out and, at the mixing stage, use a few effects to position the direct and dry guitar sound perfectly in the mix. This works fine even without a connected loudspeaker. When you do use a loudspeaker – even if it's only at room volume levels – the sound from the Recording Out will be that little bit more vibrant and punchy because of the "current feedback". This current has an effect on the sound, since it allows the power amp and speaker to work together in tandem. With ***REMOTE1™*** and the help of the **PowerSoak**, you can bring the amp into saturation while reducing the power. This lets you keep the volume level bearable and you will also get more overtones and punch from the amp for your recording.

Of course, you can also position a microphone in front of the loudspeaker for recording. In that case, I would record both the microphone signal and the direct Recording Out signal. In your recording software, after you have recorded you should make sure you compensate for the time lag differences from all signals, to make certain they are all in phase with one another. Later, when you get to the mixing stage, you can still make any necessary adjustments to the mix ratios.

Miking up – an art in itself

Anyone who has ever tried to record a guitar amp with a microphone will have had the following experience: through the microphone, the signal sounds completely different to what you hear when you're stood directly in front of the amp. So, how do you mike up an amp correctly? Here are a few tips from my experience. Put the microphone really close to the speaker – this is also known as "close miking". If you were to put the mic further away, then power and presence would be lacking. Sure, if you have a large recording space, you can record the amp with multiple mics. The different amounts of time it takes the sound to reach the mics can result in so-called

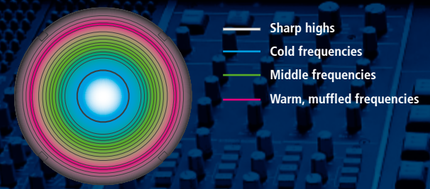


Fig. 1: Sound zones

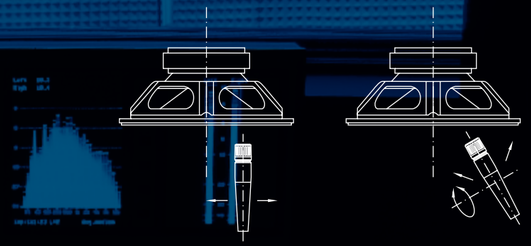


Fig. 2: Miking up a loudspeaker

phase shifts. The time differences, though, can be compensated for with modern recording software. Here, the craft of the sound engineer begins. In the studio, but also live, close miking – without any ambient sound – is almost always used. If a certain sound space is required, it is conveniently supplied by the mixing desk. In live situations, the picked up guitar sound is sent back through a PA system into sound spaces with sufficient reflections. Therefore, in these cases, close miking is the right solution. The decisive factor is always the quality of the direct – close miked – signal.

Naturally, a miked guitar speaker offers up the most authentic solution. But the placement of the mic in front of the speaker is an art, because every centimetre you move it alters the sound radically, making a balanced sound very hard to find. I've spent hours in front of a speaker, moving the mic around and finding the best position and angle, in order to find and then mark my own "sweet spot"…

The sound of the recording is one thing, but the playing feel also has to be right. The sound also has to be big and powerful, otherwise you won't 'feel' it.

Mixing

Regardless of whether you're recording with a mic or through the direct Recording Out signal, a little post-production – with echo (even just a bit, so it's almost inaudible), reverb, and minimal EQ and compression – will make your sound vibrant and natural, and will deliver professional sounding results.

There are three different types of reverb that help me with this: Plate, the good old plate reverb, which can be heard on early Van Halen albums. Their sound simulates larger rooms, like sports halls. During mixing, I use plate reverb to define the depth of the room in which the guitar is being played. The reverb time is between 1.5 and 3.5 seconds. Room – a small room can get the guitars to sound particularly wide. You can also use this effect in conjunction with short delays. Nowadays, I also like to use short convolution reverb IR Responses for this. In the 80s, the 'Eventide' Chorus was particularly fashionable.

The simulation of a real genuine space, in my opinion, is very well suited for giving a sound real height, as well as depth. It's also worth trying out mixing the various miked and Recording Out signals.
Trying out a mix with all of these effects is worth it – mainly because you need to check the different volumes against each other. Often I only use very little of two of these effects, but the third one very prominently. If I were only to use one of the effects, though, something would be missing.
It's also worth lightly EQing and compressing the guitar and reverb signals again. This is because every instrument needs its own space in the mix, and everything you take away somewhere gives other instruments more room. Here's the motto: slim down everything as much as possible without losing character or making the sound lifeless.

Troubleshooting

What to do as standard when looking for the cause of a fault
Check if all cables (guitar, FX, and speaker cables) have been correctly plugged in and are in full working order. Take out all FX devices and test ***AMP1™*** first without any peripheral devices.

AMP1™ won't switch on

There is no power. Ensure you've connected the cable to the mains correctly.

AMP1™ is correctly cabled up and switched on, but I still don't hear anything

- The VOLUME control on the guitar is turned down.
- ***AMP1™***'s MASTER and/or VOLUME controls are turned down.
- All sound controls are set to 0.
- The FX path is activated, and is set to SERIAL, but the connected FX device is not working.

The CLEAN Channel sounds overdriven

Turn the Boost off, and turn down control **24**. Turn the **CLEAN Volume** down to 3. From 5, standard guitar pickups will start to overdrive. Powerful pickups can fully saturate when the Clean Channel is only at 3. So don't worry – if the Volume can't be turned up much, this is deliberate! The best clean amps don't have a Master. For this reason, turn up the Master! Now you can slowly turn up the **CLEAN Volume** up to the point that the sound starts to go into overdrive. After that, you can also reactivate the Boost and carefully turn up its control **24**, until you get a sound you like.

The footswitches don't show my selected function

AMP1™ is in Preset Mode ***39***.
To return to Normal Mode, switch ***AMP1™*** on while holding down the Channel button.

The amp is not reacting to external control commands from the *REMOTE1™* foot controller

- Is ***REMOTE1™*** connected to the Remote port?
- Is the jack cable you're using in full working order?
- When the switches on the Remote light up, there is a connection.

When using FX units, the sound is undefined and "muddy"

The FX unit provides a direct signal that is mixed with the original signal in the parallel FX path. Depending on the FX you're using, the phase length of the direct signal when mixed in parallel with ***AMP1™*** can lead to phase cancellation. This is particularly the case with digital FX devices, because by changing from analogue into digital and back, latency naturally occurs. This changes the phase length.
To prevent this from happening, you should turn down the direct signal in the FX device. If that's not possible, switch the FX path to **SERIAL**.

Humming noises. This topic is very complex, and there are different causes!

- The shielding of the jack cable you are using is damaged at the input or the effects path. Test this by exchanging the cable.
- Network grounding is not working correctly or is missing completely: exchange power cord, try a different power socket.
- Strong external magnetic fields are affecting the pickup, cable connections or even the amplifier. Check whether ***AMP1™*** and connected cables are situated near power transformers and/or electric motors, and make sure to keep a sufficient distance from these.

"Bright humming noises" / "whirring"

(These noises often occur on stage near dimmer packs)

- Change electrical circuit. Keep a sufficient distance. Switch the lighting system to full power and leave it there.
- Ground loop: is there a connection (for example via a shielded cable) between ***AMP1™*** and other equipment, which is also connected to network grounding via its own power plug?

If you do not have the skills or knowledge required, please consult an authorised service workshop or a service professional.

Maintenance and Service

How can I extend the lifespan of my *AMP1™*?

- Avoid extreme shaking
- Always make sure ventilation slots are uncovered, for an undisturbed air circulation
- Never expose ***AMP1™*** to extreme heat or cold.
- Prevent dust and moisture from entering the device.
- Never connect devices with excessively high output levels to ***AMP1™*** 's input ports.
- No "do it yourself" repairs! The replacement of internal fuses also should be done by an experienced technician.
- No "do it yourself" replacing of tubes! The tubes used in ***AMP1™*** are characterised by exemplary build quality and an extremely long lifespan. It's extremely unlikely that you'll have change tubes as would be the case with typical tube amps.

Important Safety Instructions! Please read before connecting!

This product has been built in accordance with IEC 60065 and left the factory in safe working order. In order to maintain this condition and ensure safe operation, the user must follow the advice and warnings in the operating manual.

The device conforms to Protection Class 1 (protectively earthed). If this product is used in vehicles, ships or aircraft or at altitudes exceeding 2000m above sea level, make sure to follow the appropriate safety regulations, which may exceed the IEC 60065 requirements.

WARNING: To avoid the risk of fire and electric shock, do not expose the device to moisture or rain. Do not open the housing – no user serviceable parts are contained inside. Must only be serviced by qualified service personnel.

This symbol, wherever it appears, alerts you to the presence of dangerous, uninsulated dangerous voltage inside the enclosure – voltage that may be sufficient to constitute a risk of electric shock.

This symbol, wherever it appears, alerts you to the presence of externally accessible dangerous voltage. External wiring connected to any terminal marked with this symbol must be a pre-assembled cable complying with the manufacturers' recommendations, or must be wiring installed by qualified personnel only.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

This symbol, wherever it appears, alerts you: Take care! Hot surface! To prevent burns, do not touch.

The CE mark is a conformity marking that confirms compliance with the valid EMC directive (2004/108/EG). The standards EN 61000-6-1, EN 61000-6-3 and the Low Voltage Directive (2006/95/EG) with standard EN 60335-1 are also complied with.

This device complies with directive (2002/96/EG) WEEE. Appliance must not be disposed of with household waste, but must be recycled at the appropriate collection points for electrical and electronic equipment/waste.

- Please read these instructions.
- Keep these instructions.

CAUTION: When in Lead mode, extremely high gain and volume levels can cause strong feedback. Avoid this at all costs, as this may cause hearing loss, and speakers may be damaged! For this reason, when operating at higher volumes, reduce the Gain, Treble and Presence settings!

- The specification plate and technical data can be found on the underside of the device.
- Follow all warnings marked on the product and follow all instructions in this manual.
- Do not use this product near water. Do not place the product near water, bathtubs, washbasins, kitchen sinks, wet areas, swimming pools or damp rooms.
- Do not place objects that contain liquid on the product (such as vases, glasses, bottles, etc.)
- Clean only with a dry cloth.
- Do not remove any covers or sections of the housing.
- To avoid the risk of electric shock, the grounding of this product must always be maintained. Use only the supplied power cable, and always maintain the function of the lateral grounded contacts of the mains connection. Do not attempt to bypass the safety purpose of the grounded plug.
- Protect the power cable from being walked on or squeezed, particularly near plugs, electrical sockets, and the point where they exit the device! Power supply cables should always be handled with care. Check power cables for cuts and signs of wear and tear at regular intervals, especially around the plug and the point where the cable exits the device.
- Never use a damaged power cable.
- Unplug the device during thunderstorms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the unit has been damaged in any way, such as:
  - When the power cable or plug is damaged or frayed.
  - If liquid has been spilled or objects have fallen into the device.
  - If the device has been exposed to rain or moisture.
  - If the device does not operate normally when the operating instructions are followed.
  - If the device has been dropped or the housing has been damaged.
- Do not connect external speakers to this product with an impedance lower than the minimum impedance given on the product or in this manual. Use only cables with an adequate cross section in accordance with the local safety regulations.
- Never expose the device to direct sunlight.
- Do not install the device near heat sources such as radiators, heat ex changers, ovens or other devices that produce heat.
- Do not block the ventilation openings. Install the device in accordance with manufacturer's instructions. The device must not be incorporated into a built-in installation, for example a rack, unless proper ventilation is provided.
- Allow the device to rest for at least one hour after it has been moved from cold to warm surroundings. Risk of condensation water inside the unit.
- Never use the device near open fire.
- The device must be placed at least 20cm away from walls, must not be covered, and it must be ensured that at least 50cm of free air space is left above the device.

- The device may only be used with stands, tripods, tables or brackets specified by the manufacturer or sold with the product.
- Use only accessories recommended by the manufacturer. This applies to all kinds of accessories, for example protective covers, transport bags, stands, wall or ceiling mounting equipment. When attaching any kind of accessories to the product, always follow the instructions provided by the manufacturer. Only use the fixing points on the product as specified by the manufacturer.
- The device is NOT suitable to be used by any person or individuals (including children) with reduced physical, sensory or mental ability, or by individuals with insufficient experience and/or knowledge to operate such an appliance. Children under four years of age must be kept away from the device at all times.
- Never push objects of any kind into the device through housing slots as they might touch dangerous voltage points or cause short outs. This could result in the risk of fire or electric shock.
- The device is capable of producing sound pressure levels in excess of 90dB. This could lead to permanent hearing damage! Exposure to extremely high noise levels may cause permanent hearing loss. If continuously exposed to such high volume levels, hearing protection should be worn.
- The manufacturer only guarantees the safety, reliability and performance of this device under the following conditions:
  - Installation, extension, re-adjustment, modifications or repairs are carried out by the manufacturer or by authorised personnel.
  - The electrical installation of the relevant part complies with the requirements of IEC (ANSI) specifications.
  - The device is used in accordance with the operating instructions.
  - The electrical safety of the device is regularly checked and tested by a qualified technician.

Technical Data:

Input: unbalanced jack
Sensitivity: OV-15V P2P maximum
Input impedance: 2 M Ω
Power output: about 100 watts

Speaker connections
Input jacks: 1 x 8 Ω, 1 x 16 Ω

FX Send/Return: unbalanced jack

FX Send-Output and FX-Return Input levels dependent on switching
LOW: -10dBU +/-1dB or 0.7V P2P
HI: +4dBU +/-1dB or 3.46V P2P
FX Send-Output impedance: < 1.3kΩ
FX Return-Input impedance: > 18kΩ

Mains voltage range: 100-240V +/- 10 % 50-60 Hz
Power consumption: max. 150 watts
Fuses: internal: 3.15 SB

Ambient operating temperature range:
0 °C to + 35 °C

We reserve the right to perform technical modifications without prior notice.

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Logic MIDI control system:
STM 8 S

System interfaces:
Upgradeable with external programming device
BluGuitar® specific, anachronous data protocol.

Dimensions:
Width: 245 mm
Height: 68 mm
Depth: 192 mm

Weight: 1.2 kg

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E-Mail: mail@bluguitar.com
www.bluguitar.com

AMP 1 FAMILY

	FEATURES	SWITCHING
AMP 1	**100 WATT POWER, CLEAN, VINTAGE, CLASSIC, MODERN, BOOST, REVERB, CUSTOM CONTROL™, FX-LOOP** (serial - parallel), **PHONES, RECORDING OUT**	**CLEAN - OVERDRIVE, BOOST, REVERB** **Your 3 favourite sounds as Presets on internal Footswitches**
MIDI 1	**MIDI IN-ADAPTER** for **AMP1** access to all **AMP1** switching functions by MIDI Program Change	**CLEAN, VINTAGE, CLASSIC, MODERN, BOOST, REVERB, FX-LOOP, 128 PRESETS*, 2ND MASTER**, POWERSOAK****, access to **2ND MASTER, POWERSOAK** LEVEL and **GAIN** for all 4 Channels by MIDI Control Change * REQUIRES STANDARD MIDI PEDAL ** REQUIRES MIDI PEDAL WITH CONTROLER
REMOTE 1	**2ND MASTERVOLUME, POWERSOAK, MIDI OUT** programmable **GAIN** for all 4 Channels **36 Presets in 4 Banks à 9 Sounds**	**CLEAN, VINTAGE, CLASSIC, MODERN, BOOST, REVERB, FX-LOOP , 2ND-MASTER, POWERSOAK** **PRESETMODE: 4 BANKS** à **9 PROGAMMABLE PRESETS** Programmable with **REMOTE1**
LOOPER KIT	**4 TRUE-BYPASS-RELAIS-LOOPS**	

PERFECT FOR

HOME & STUDIO

Recording Out

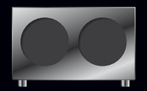
CLUB

BluGuitar TONE INNOVATION
NANOCAB

STAGE

BluGuitar TONE INNOVATION
FATCAB

OPEN AIR



2x12 Box

ARENA

4x12 Box

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